

What Is Claimed Is:

1. A method of identifying a compound that inhibits a yfhC polypeptide, comprising the steps of contacting a yfhC polypeptide and a yfhC substrate with a candidate compound of interest and detecting the presence or absence of a modified yfhC substrate, where the absence of the modified substrate or a reduction in the amount of the modified substrate produced as compared to a control reaction identifies the candidate compound as an inhibitor of the yfhC polypeptide.
2. The method of Claim 1 in which the yfhC polypeptide is a bacterial yfhC polypeptide.
3. The method of Claim 2 in which the bacterial yfhC polypeptide comprises an amino acid sequence corresponding to the polypeptide of FIG. 1A, FIG. 2, FIG.3B or any of the accession nos. of TABLE 1.
4. The method of Claim 1 in which the yfhC substrate is a polynucleotide comprising from 3 to about 80 nucleotides that includes an ACG loop.
5. The method of Claim 4 in which the polynucleotide is an RNA.
6. The method of Claim 4 in which the polynucleotide comprises from 7 to about 21 nucleotides and is capable of forming a hairpin secondary structure, and wherein said ACG sequence resides in a loop region of the hairpin.
7. The method of Claim 4 in which the yfhC substrate is a bacterial tRNA<sup>Arg(ACG)</sup>.
8. The method of Claim 7 in which the tRNA<sup>Arg(ACG)</sup> is selected from the group of tRNAs depicted in FIG. 5.
9. The method of Claim 4 in which the yfhC substrate is an RNA comprising from 7 to 17 nucleotides that has a nucleotide sequence derived from the anticodon stem loop of a bacterial tRNA<sup>Arg(ACG)</sup>.
10. The method of Claim 9 in which the bacterial tRNA<sup>Arg(ACG)</sup> is selected from the group of tRNAs depicted in FIG. 5.

11. The method of Claim 9 in which the yfhC substrate is selected from the group consisting of

C U/T C G G C U/T <u>ACG</u> A A C C G A G	(SEQ ID NO:1);
U/T C G G C U/T <u>ACG</u> A A C C G A	(SEQ ID NO:2);
C G G C U/T <u>ACG</u> A A C C G	(SEQ ID NO:3);
G G C U/T <u>ACG</u> A A C C	(SEQ ID NO:4) and
G C U/T <u>ACG</u> A A C	(SEQ ID NO:5).

12. A method of identifying an antibacterial compound, comprising the steps  
5 of contacting a yfhC polypeptide and a yfhC substrate with a candidate compound of interest and detecting the presence or absence of a modified yfhC substrate, where the absence of the modified substrate or a reduction in the amount of the modified substrate produced as compared to a control reaction identifies the candidate compound as an antibacterial compound.

10 13. An antisense oligonucleotide composed of from 8 to about 30 nucleotides and which includes a sequence which hybridizes to a portion of a polynucleotide encoding a bacterial yfhC polypeptide.

14. A compound identified by the screening method of Claim 1 or Claim 12.

15 15. A pharmaceutical composition comprising a compound that inhibits a yfhC polypeptide or the expression of a yfhC polypeptide and a pharmaceutically acceptable carrier, excipient or diluent.

16. The composition of Claim 15 in which the compound is an antisense oligonucleotide according to Claim 13.

20 17. The composition of Claim 16 in which the compound is a compound identified by the screening method of Claim 1 or Claim 12.

18. A method of inhibiting the growth or replication of a bacterium, comprising administering to the bacterium an amount of a compound that inhibits a yfhC polypeptide effective to inhibit its growth or replication.

19. The method of Claim 18 in which the compound is an antisense oligonucleotide according to Claim 13.
20. The method of Claim 18 in which the compound is a compound identified by the screening method of Claim 1 or Claim 12.
- 5 21. A method of treating or preventing a bacterial infection in a subject, comprising administering to a subject in need thereof an amount of a compound that inhibits a yfhC polypeptide effective to treat or prevent the infection..
22. The method of Claim 21 in which the compound is an antisense oligonucleotide according to Claim 13.
- 10 23. The method of Claim 21 in which the compound is a compound identified by the screening method of Claim 1 or Claim 12.
24. A kit comprising a yfhC polypeptide and a yfhC substrate.